

## ALL-METAL THREE-DIMENSIONAL CIRCUITS AND MEMORIES

### ABSTRACT OF THE DISCLOSURE

A three-dimensional circuit and methods for fabricating such a circuit are described. The three-dimensional circuit includes a plurality of stacked levels on a substrate. Each level includes a plurality of all-metal circuit components exhibiting giant magnetoresistance and arranged in two dimensions, the circuit further includes an interconnect for providing interconnections between the circuit components on different ones of the plurality of levels.